



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Orchard

Application No: 09/823,929

Filed: March 31, 2001

For: AN ARCHITECTURE AND RELATED
METHODS FOR EFFICIENTLY
PERFORMING COMPLEX ARITHMETIC

Assistant Commissioner For Patents
Washington, D.C. 20231

Examiner: Not Yet Assigned

Art Unit: 2121

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7 JANUARY 2003

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Signature

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PRELIMINARY AMENDMENT

Sir:

Prior to examination of the above-referenced U.S. Patent Application, please enter this
amendment.

IN THE SPECIFICATION

Please replace the paragraph beginning on page 9, line 3 with the following:

Fig. 3 illustrates a block diagram of an example extensible, hyperpipelined summing module architecture 304, in accordance with one example embodiment of the present invention. As introduced above, the innovative architecture of summing module 304 is dynamically implemented within one or more CLB (202) blocks of an FPGA by an instance of summing module generator 222. In accordance with the illustrated example implementation of Fig. 3, summing module 304 is depicted comprising a dynamically generated, pipelined hybrid Wallace adder tree 306 of one or more stages (extensible to a hyperpipelined Wallace tree, i.e., 306A-N) which feeds a final, m-input adder stage 318. For example, the final m-input adder stage 318 may be a stage of two-input adders. As shown, the hybrid Wallace tree 306A-N is presented comprising a dynamically determined number of full-adders (fa) and associated registers (R) 308, half-adders (ha) and associated registers (R) 310 and registers (R) 312. Those skilled in the art will appreciate that each of the hybrid elements are readily implemented within one or more



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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application No.	09/823,929	
	Filing Date	March 31, 2001	
	First Named Inventor	John T. Orchard	
	Group Art Unit	2121	
	Examiner Name	Not Assigned	
Total Number of Pages in This Submission		Attorney Docket Number	15685P076

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ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> PTO/SB/08 <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 <input type="checkbox"/> Basic Filing Fee <input type="checkbox"/> Declaration/POA	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"><ul style="list-style-type: none">- Preliminary Amendment (17 pages)- Supplemental Dec/POA- Check for \$360.00- Return Receipt Postcard</div>
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Gregory D. Caldwell, Reg. No. 39,926 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	January 7, 2003

CERTIFICATE OF MAILING/TRANSMISSION			
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Typed or printed name	Deborah L. Higham		
Signature		Date	January 7, 2003



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FEE TRANSMITTAL for FY 2003

Patent fees are subject to annual revision.

Complete if Known

Application Number 097823,929
Filing Date March 31, 2001
First Named Inventor John T. Orchard
Examiner Name Not Assigned
Group/Art Unit 2121
Attorney Docket No. 15685P076

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☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT (\$) 360.00

METHOD OF PAYMENT (check one)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☐ Deposit Account

Deposit Account Number 02-2666
Deposit Account Name Blakely, Sokoloff, Taylor & Zafman LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) required under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)				(\$)	

2. EXTRA CLAIM FEES

Total Claims 40 - 20* = 20 X 18.00 = \$360.00
Independent Claims 3 - 3* = 0 X 84.00 = \$0.00
Multiple Dependent

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	84	2201	42	Independent claims in excess of 3	
1203	280	2203	140	Multiple Dependent claim, if not paid	
1204	84	2204	42	**Reissue independent claims over original patent	
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)				(\$)	360.00

*or number previously paid, if greater. For Reissues, see below

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920 *	1804	920 *	Requesting publication of SIR prior to Examiner action	
1805	1,840 *	1805	1,840 *	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1404	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	1809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$)

SUBMITTED BY

Complete (if applicable)

Name (Print/Type) Gregory D. Caldwell
Registration No. (Attorney/Agent) 39,926
Telephone (503) 684-6200
Signature [Signature] Date 01/07/03

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